Loading data for Norma rifle powders

This is a series of loads worked out by the Norma Ballistic Laboratory, using Norma cartridge components. These loads will also be suitable with other makes of primers having standard ignition properties and with other makes of bullets of equal weight and diameter.

In factory loading, chronographs and pressure guns are being used along with the loading machines, and powder charges can be adjusted to correct velocity whenever a new batch of powder goes into use. The handloader must have powders with which he can use standard loading data. Therefore, certain batches of powders which exceptionally well conform with "canister specifications" are set aside and packed for the canister trade. This is the explanation why you do not always find the same quantity of powder in the loading table and in a factory loaded cartridge. The muzzle velocity, however, is the same, and that is what counts.

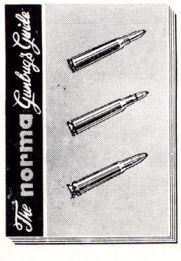
For long range data to the following loads, consult the Norma ballistic table. To avoid mistakes, always underline the loads you want to use! The information presented is based upon the results obtained in our Ballistic Laboratory, and is offered without charge as an aid to handloaders to be employed at their own discretion and risk. Safe loading practice should be observed at all times. Since we have no control over the circumstances of handloading we assume no liability for the results obtained and we guarantee only that our product meets our manufacturing standards.

The ballistics shown in the table are averages of ten shot strings fired in 24 inch barrels.

BULLET					Cartridge length		Norma	Load		Muzzle vel.		Pressure	
Index no.	Style	Weight grains	Weight grams	Diam.	inch	MM	powder	grains	grams	f/sec.	m/sec.	psi	atm.
220 Swift													
607	Soft point semi pointed	50	3.2	.224	2.62	66.5	203	40.9	2.65	4110	1253	52100	3545
609	Soft point semi pointed	55	3.6	.224	2.62	66.5	203	39.8	2.58	3840	1170	54200	3688
222 Rem.													
607	Soft point semi pointed	50	3.2	.224	2.11	53.5	200	21.0	1.36	3200	975	45500	3096
609	Soft point semi pointed	55	3.6	.224	2.11	53.5	200	21.0	1.36	3050	930	50000	3402
222 Rem. Magnum[1]													
607	Soft point semi pointed	50	3.2	.224	2.28	58.0	203	30.0[2]	1.95	3500	1067	49670	3380
609	Soft point semi pointed	55	3.6	.224	2.28	58.0	203	29.0	1.88	3320	1012	49920	3397
223													
607	Soft point semi pointed	50	3.2	.224	2.17	55.0	200	25.2	1.63	3300	1006	50800	3456
609	Soft point semi pointed	55	3.6	.224	2.17	55.0	201	25.9	1.68	3300	1006	47000	3198
22-250													
607	Soft point semi pointed	50	3.2	.224	2.32	59.0	203	38.8	2.51	3800	1158	48500	3300
609	Soft point semi pointed	55	3.6	.224	2.32	59.0	203	38.0	2.46	3650	1113	48500	3300
225 Win.[1]													
607	Soft point semi pointed	50	3.2	.224	2.40	61.0	203	34.0	2.20	3685	1123	49790	3388
609	Soft point semi pointed	55	3.6	.224	2.40	61.0	203	33.0	2.14	3500	1067	47080	3203
243 Win.													
699	Soft point semi pointed	80	5.2	.243	2.54	64.5	205	49.4	3.20	3500	1067	46400	3160
504	Soft point semi pointed	90	5.8	.243	2.54	64.5	204	45.3	2.93	3200	975	49600	3375
566	Soft point semi pointed	100	6.5	.243	2.62	66.5	204	45.1	2.92	3070	936	43000	2926
566	Soft point semi pointed	100	6.5	.243	2.62	66.5	205	48.3	3.13	3179	969	49140	3342
244 Rem.													
503	Hollow point	75	4.9	.243	2.74	69.5	203	42.3	2.74	3500	1067	41200	2803
504	Soft point semi pointed	90	5.8	.243	2.74	69.5	204	44.2	2.86	3200	975	41600	2831
504	Soft point semi pointed	90	5.8	.243	2.74	69.5	205	50.0	3.24	3421	1043	49450	3363
6 MM Rem.													
503	Hollow point	75	4.9	.243	2.82	71.5	204	50.6	3.28	3650	1113	48100	3273
504	Soft point semi pointed	90	5.8	.243	2.77	70.0	204	47.7	3.09	3300	1006	48800	3320
566	Soft point semi pointed	100	6.5	.243	2.82	71.5	205	47.1	3.05	3190	972	49200	3348
250 Savage													
505	Soft point semi pointed	87	5.6	.257	2.44	62.0	203	35.3	2.29	3000	924	45500	3096
506	Soft point semi pointed	100	6.5	.257	2.44	62.0	203	32.7	2.12	2820	860	41500	2824
507	Soft point semi pointed	120	7.8	.257	2.44	62.0	203	31.3	2.03	2640	805	46600	3171
257 Roberts													
505	Soft point semi pointed	87	5.6	.257	2.77	70.0	204	50.5	3.27	3300	1024	54000	3674
506	Soft point semi pointed	100	6.5	.257	2.77	70.0	203	37.8	2.45	2900	884	41100	2796
507	Soft point semi pointed	120	7.8	.257	2.77	70.0	203	36.6	2.37	2650	808	39700	2700
6.5 Jap.													
618	Soft point semi pointed boattail	139	9.0	.264	2.82	71.5	203	32.8	2.12	2428	740	32200	2191
509	Soft point round nose	156	10.1	.264	2.89	73.5	203	29.3	1.90	2067	630	31600	2150
6.5x54 MS													
510	Soft point semi pointed	77	5.0	.264	2.56	65.0	203	40.5	2.62	3116	950	41100	2796
618	Soft point semi pointed boattail	139	9.0	.264	2.93	74.5	203	37.8	2.45	2575	785	43800	2980
509	Soft point round nose	156	10.1	.264	3.01	76.5	203	37.5	2.43	2461	750	45000	3062
6.5 Carcano													
509	Soft point round nose	156	10.1	.264	2.97	75.5	200	27.5	1.78	2000	610	32800	2232
6.5x55													
510	Soft point semi pointed	77	5.0	.264	2.62	66.5	200	37.8	2.45	3116	950	41800	2844
511	Full jacket pointed	93	6.0	.264	2.70	68.5	203	45.2	2.93	3150	960	41200	2803
618	Soft point semi pointed boattail	139	9.0	.264	2.99	76.0	204	46.6	3.02	2788	850	47100	3205
618	Soft point semi pointed boattail	139	9.0	.264	2.99	76.0	205	51.2	3.32	2946	898	49630	3375
509	Soft point round nose	156	10.1	.264	3.07	78.0	204	44.2	2.86	2493	760	47100	3205
509	Soft point round nose	156	10.1	.264	3.07	78.0	205	48.8	3.16	2720	829	49440	3362
270 Win.													
621	Soft point semi pointed	110	7.1	.277	3.15	80.0	204	59.1	3.83	3250	991	45000	3062
621	Soft point semi pointed	110	7.1	.277	3.15	80.0	205	61.2[3]	3.96	3314	1010	46450	3160
515	Soft point semi pointed boattail	130	8.4	.277	3.15	80.0	204	57.0	3.69	3140	957	48500	3300
515	Soft point semi pointed boattail	130	8.4	.277	3.15	80.0	205	60.3[3]	3.91	3251	991	50700	3448
518	Soft point semi pointed boattail	150	9.7	.277	3.23	82.0	204	52.4	3.39	2800	853	47400	3225
518	Soft point semi pointed boattail	150	9.7	.277	3.23	82.0	205	58.5[3]	3.79	3028	923	52520	3571
7x57													
624	Soft point semi pointed	110	7.1	.283	2.87	73.0	203	45.8	2.97	3067	935	47100	3205
520	Soft point semi pointed boattail	150	9.7	.283	3.05	77.5	203	44.1	2.86	2756	840	47100	3205
523	Soft point semi pointed boattail	160	10.4	.283	3.03	77.0	203	44.2	2.86	2707	825	50000	3402
522	Soft point round nose	175	11.3	.283	3.07	78.0	203	42.3	2.74	2490	760	47700	3246
7x61 S&H (26 inch barrel)													
624	Soft point semi pointed	110	7.1	.283	3.03	77.0	203	58.5	3.79	3480	1061	54400	3701
520	Soft point semi pointed boattail	150	9.7	.283	3.19	81.0	204	63.2	4.09	3150	960	54000	3674
523	Soft point semi pointed boattail	160	10.4	.283	3.19	81.0	205	64.0	4.15	3100	945	49000	3334
522	Soft point round nose	175	11.3	.283	3.19	81.0	205	65.0	4.21	3000	914	54000	3674
7 MM Rem. Magnum													
519	Soft point semi pointed	110	7.1	.283	3.13	79.5	204	76.7	4.97	3750	1143	53700	3654
520	Soft point semi pointed boattail	150	9.7	.283	3.29	83.5	205	71.4	4.63	3260	994	50800	3456
523	Soft point semi pointed boattail	160	10.4	.283	3.19	81.0	205	69.4	4.50	3180	969	53700	3654
522	Soft point round nose	175	11.3	.283	3.21	81.5	205	67.4	4.37	3070	936	53600	3647

[1]) Load developed by H. P. White Laboratory, 26 inch barrel. [2]) Compressed load. [3]) Capacity load.

Index no.	BULLET Style	Weight grains	Weight grams	Diam.	Cartridge length inch.	Cartridge length MM	Norma powder	Load grains	Load grams	Muzzle vel. f/sec.	Muzzle vel. m/sec.	Pressure psi	Pressure atm.
284 Win.[1]													
520	Soft point semi pointed boattail	150	9.7	.283	2.80	71.0	205	61.0[2]	3.95	3025	922	52310	3559
30-30 Win.													
631	Soft point flat nose	150	9.7	.308	2.50	63.5	201	35.5	2.30	2410	735	41900	2851
633	Soft point flat nose	170	11.0	.308	2.50	63.5	201	32.4	2.10	2220	677	41200	2800
30-40 Krag[1]													
528	Soft point semi pointed boattail	180	11.6	.308	3.09	78.5	205	50.0[2]	3.24	2420	738	38890	2646
308 Norma Magnum													
529	Soft point semi pointed boattail	130	8.4	.308	3.17	80.5	204	78.8	5.10	3560	1085	53300	3627
630	Soft point semi pointed boattail	150	9.7	.308	3.21	81.5	204	77.3	5.01	3350	1021	54000	3674
578	Soft point semi pointed	180	11.6	.308	3.25	82.5	205	76.7	4.97	3100	945	51600	3511
534	Soft point round nose	220	14.2	.308	3.31	84.0	204	69.0	4.47	2810	857	54100	3681
308 Win.													
529	Soft point semi pointed boattail	130	8.4	.308	2.62	66.5	200	40.6	2.63	2900	884	47800	3252
630	Soft point semi pointed boattail	150	9.7	.308	2.65	67.5	201	45.5	2.95	2860	872	48500	3300
578	Soft point semi pointed boattail	180	11.6	.308	2.74	69.5	203	44.3	2.87	2610	796	49000	3334
7.62 Russian													
529	Soft point semi pointed boattail	130	8.4	.308	2.72	69.0	203	54.6	3.54	3100	945	48000	3266
630	Soft point semi pointed boattail	150	9.7	.308	2.76	70.0	203	52.0	3.37	2936	895	48000	3266
528	Soft point semi pointed boattail	180	11.6	.308	2.82	71.5	203	45.2	2.93	2624	800	41900	2851
534	Soft point round nose	220	14.2	.308	2.85	72.5	203	44.9	2.91	2395	730	48000	3266
30-06													
529	Soft point semi pointed boattail	130	8.4	.308	3.11	79.0	203	57.5	3.72	3280	1000	47000	3198
630	Soft point semi pointed boattail	150	9.7	.308	3.13	79.5	203	54.7	3.54	2970	905	44500	3028
578	Soft point semi pointed boattail	180	11.6	.308	3.21	81.5	203	50.0	3.24	2700	823	45300	3082
534	Soft point round nose	220	14.2	.308	3.25	82.5	203	47.3	3.06	2410	735	43700	2973
300 H&H													
630	Soft point semi pointed boattail	150	9.7	.308	3.48	88.5	203	63.6	4.12	3020	921	53800	3661
528	Soft point semi pointed boattail	180	11.6	.308	3.56	90.5	204	69.3	4.49	2920	890	47700	3246
528	Soft point semi pointed boattail	180	11.6	.308	3.56	90.5	205	75.0[3]	4.86	3041	927	50440	3430
534	Soft point round nose	220	14.2	.308	3.60	91.5	204	63.2	4.09	2620	800	48800	3320
534	Soft point round nose	220	14.2	.308	3.60	91.5	205	71.5	4.63	2750	838	54120	3679
300 Win. Magnum[1]													
630	Soft point semi pointed boattail	150	9.7	.308	3.32	84.5	205	82.0	5.32	3400	1036	52990	3605
528	Soft point semi pointed boattail	180	11.6	.308	3.34	85.0	205	78.0	5.05	3135	956	53250	3623
7.65 Argentine													
536	Soft point semi pointed	130	8.4	.311	2.68	68.0	201	50.9	3.30	3084	940	50000	3402
564	Soft point semi pointed	150	9.7	.311	2.85	72.5	201	47.8	3.10	2920	890	46200	3143
537	Soft point semi pointed boattail	180	11.6	.311	2.87	73.0	203	46.5	3.01	2739	835	46000	3130
538	Soft point round nose	215	14.0	.311	2.95	75.0	203	43.9	2.84	2411	735	50000	3402
303 British													
536	Soft point semi pointed	130	8.4	.311	2.78	70.5	200	39.4	2.55	2790	850	40500	2756
564	Soft point semi pointed	150	9.7	.311	2.95	75.0	201	44.6	2.89	2720	829	40000	2722
537	Soft point semi pointed boattail	180	11.6	.311	2.97	75.5	203	43.7	2.83	2540	774	42300	2878
538	Soft point round nose	215	14.0	.311	3.05	77.5	203	39.4	2.55	2180	664	41900	2851
7.7 Jap.													
536	Soft point semi pointed	130	8.4	.311	2.84	72.0	203	50.0	3.24	2952	900	38600	2626
564	Soft point semi pointed	150	9.7	.311	3.01	76.5	201	47.1	3.05	2724	830	39000	2654
537	Soft point semi pointed boattail	180	11.6	.311	3.03	77.0	203	45.2	2.93	2493	760	38000	2586
538	Soft point round nose	215	14.0	.311	3.13	79.5	203	43.5	2.82	2264	690	37500	2552
8x57 JR													
539	Soft point round nose	196	12.7	.318	2.97	75.5	203	44.8	2.90	2362	720	37300	2538
8x57 JRS													
541	Soft point semi pointed	123	8.0	.323	2.77	70.0	200	42.0	2.72	2690	820	39700	2701
542	Soft point round nose	159	10.3	.323	2.85	72.5	203	48.4	3.14	2592	790	38900	2647
540	Soft point round nose	196	12.7	.323	2.95	75.0	203	45.5	2.95	2395	730	39000	2654
544	Hollow point boattail	198	12.8	.323	3.11	79.0	203	46.6	3.02	2461	750	39200	2667
546	Soft point round nose	227	14.7	.323	2.93	74.5	203	43.0	2.79	2200	671	39700	2701
8x57 JS													
541	Soft point semi pointed	123	8.0	.323	2.76	70.0	200	43.2	2.80	2888	880	44300	3014
542	Soft point round nose	159	10.3	.323	2.85	72.5	203	50.9	3.30	2724	830	44600	3035
648	Soft point semi pointed	165	10.7	.323	2.87	73.0	201	52.2	3.38	2854	870	46300	3150
540	Soft point round nose	196	12.7	.323	2.95	75.0	203	48.3	3.13	2526	770	47100	3205
544	Hollow point boattail	198	12.8	.323	3.11	79.0	203	49.4	3.20	2624	800	47700	3246
546	Soft point round nose	227	14.7	.323	2.93	74.5	203	45.5	2.95	2329	710	47100	3205
8x57 J													
573	Soft point round nose	159	10.3	.318	2.85	72.5	203	50.0	3.24	2724	830	46500	3164
539	Soft point round nose	196	12.7	.318	2.97	75.5	203	47.1	3.05	2526	770	45700	3109
338 Win.[1]													
—	Soft point	200	13.0	.338	3.33	84.5	205	80.0[2]	5.19	3000	915	51950	3535
—	Soft point	250	16.2	.338	3.34	85.0	205	76.0[2]	4.92	2730	832	53400	3633
358 Norma Magnum													
547	Soft point semi pointed	200	13.0	.358	3.19	81.0	203	76.0	4.92	3120	951	53900	3667
548	Soft point semi pointed	250	16.2	.358	3.23	82.0	203	70.2	4.55	2800	853	51100	3477
358 Win.													
547	Soft point semi pointed	200	13.0	.358	2.68	68.0	201	48.3	3.13	2530	771	42100	2864
548	Soft point semi pointed	250	16.2	.358	2.72	69.0	203	47.4	3.07	2250	686	41000	2790
9.3x57													
549	Hollow point boattail	232	15.0	.365	2.97	75.5	201	49.4	3.20	2329	710	36000	2449
550	Soft point round nose	286	18.5	.365	3.01	76.5	201	44.6	2.89	2067	630	35500	2415
9.3x62													
549	Hollow point boattail	232	15.0	.365	3.19	81.0	201	57.3	3.71	2624	800	47100	3205
550	Soft point round nose	286	18.5	.365	3.23	82.0	201	54.7	3.54	2362	720	47700	3246
375 H&H													
640	Soft point semi pointed	270	17.5	.375	3.58	91.0	203	70.5	4.57	2740	835	48200	3280
641	Soft point semi pointed	300	19.4	.375	3.58	91.0	203	67.1	4.35	2550	777	45100	3069



The Norma Gunbug's Guide

If you are interested in further loading data, consult the Norma "Gunbug's Guide", an inexpensive booklet available from your Norma dealer. There you will also find interesting articles on about 30 other topics concerning ammunition and handloading, such as how to handle your brass for maximum performance, how bullet velocity and breech pressure are measured, how ammunition is manufactured etc. For the young gun enthusiast, Norma has the new "Beginner's Guide" available free of charge.

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norma

MARCH 1, 1969

LOADED AMMUNITION and UNPRIMED BRASS CASES for HUNTING and TARGET SHOOTING

Caliber	Grains	Type	Loaded Ammunition Price/20	Unprimed Cases Price/100
.22 Hornet (Box 50)	45	SP	$7.45	Not available
.220 Swift	50	SP	4.35	$11.86
.222 Remington	50	SP	3.50	8.60
.223	55	SP	3.80	9.55
.22-.250	50 55	SP SP	3.80	12.35
.243 Winchester	80 100	SP SP	4.80	12.35
6mm Remington	100	SP	4.80	12.35
.250 Savage	87 100	SP SP	4.50	12.35
.257 Roberts	100 120	SP SP	4.95	Not available
6.5 Jap	139 156	SPBT SP	5.80	13.00
6.5 MS	139 156	SPBT SP	5.80	13.00
6.5 Carcano	156	SP	5.80	13.00
6.5 Norma (6.5 X 55)	139 156	SPBT SP	5.80	13.00
.270 Winchester	110 130 150	SP SPBT SPBT	5.30	13.00
7mm Mauser	110 150 175	SP SPBT SP	5.30	13.00
Super 7x61	160	SPBT	6.85	16.05
7mm Rem. Mag.	150 175	SP SP	6.55	16.05
7.62 Russian	180	SPBT	5.80	13.65
7.65 Argentine Mauser	150	SP	5.80	13.00
7.7 Jap	130 180	SP SPBT	5.80	13.00
.30 U. S. Carbine	110	SP	3.35	7.50
.308 Winchester	130 150 180	SPBT SPBT SPBT	5.30	12.35
Special w/Dual Core	180	SP	5.80	
.30-30 Winchester	150 170	SPF SPF	4.15	11.15

LOADED AMMUNITION and UNPRIMED CASES

Caliber	Grains	Type	Loaded Ammunition Price/20	Unprimed Cases Price/100
	130	SPBT		
	150	SP		
30-06	180	SPBT	5.30	13.00
	220	SP		
	220	FJBT		
Special w/Dual Core	180	SP	5.80	
	180	SPBT		
.300 H & H	220	SP	6.70	16.65
	130	SP		
.303 British	150	SP	5.30	13.00
	180	SPBT		
.308 Norma Belt. Mag.	180	Dual-Core	7.45	17.30
8 x 57 JR (.318 dia.)	196	SP	5.80	13.00
	123	SP		
8 mm	165	SP	5.30	13.00
Mauser (.322 dia.)	196	SP		
	200	SP		
.358 Winchester	250	SP	6.40	12.35
.358 Norma Belt. Mag.	250	SP	7.30	17.30
	270	SP		
.375 H & H Magnum	300	SP	8.40	17.85
9.3 x 74 R	Not Available			16.65
.44 Magnum	240	SPF	3.70	7.65
Special Carbine Load	236	HP	3.95	
			Price/50	
.25 A.C.P.	50	FJ	4.70	Not available
.30 Luger	93	FJ	7.50	7.20
.32 A.C.P.	77	FJ	5.35	4.55
.32 S & W	85	Lead	4.05	Not available
.32 S & W Long	98	Lead RN	4.25	Not available
9mm Luger	104	Arm. Prc'g	7.30	
	115	HP	6.95	7.20
	116	FJ	6.70	
.357 Magnum	158	SP	6.90	
	158	HP	6.90	5.45
	158	FS	7.15	
.38 S. & W.	146	Lead RN	5.05	4.55
	158	Lead RN	5.15	
	158	HP	6.60	
.38 Special	110	HP	6.60	
Match Ammo	148	Lead WC	5.35	4.95
w/sharp shoulder	(Mid-range)			
" "	158	FJ		
	(50 yd.)		6.55	
.380 A.C.P.	95	FJ	5.45	Not available
	240	SPF	9.25	7.65
.44 Magnum	236	HP	9.50	
.45 A.C.P.	230	HP	8.00	Not available
7.5 Nagant (Berdan Primed)	103	Lead	7.35	Not available

norma

PRECISION BULLETS for HUNTING and TARGET SHOOTING

Caliber	Grains	Type	Price/100
	50	SP	$3.40
.22 (.224 dia.)	50	FJ	3.40
	55	SP	3.40
	55	FJ	3.40
	80	SP	4.60
6mm (.243 dia.)	100	FJ	4.90
	100	SP	4.90
	87	SP	4.60
.25 (.257 dia.)	100	SP	4.80
	120	SP	5.15
	77	SP	4.50
	139	SPBT	5.50
6.5 (.264 dia.)	139	FJBT Match	5.50
	156	SP	5.75
	110	SP	5.15
.270 (.277 dia.)	130	SPBT	5.50
	150	SPBT	5.75
	110	SP	5.15
	150	SPBT	5.75
7mm (.283 dia.)	160	SPBT	5.75
	175	SP	6.00
.32 ACP (.307 dia.)	77	FJ	3.65
.30 Luger (.307 dia.)	93	FJ	3.65
	93	SP	3.65
	110	SP	4.75
	110	FJ	4.75
	130	SPBT	5.00
	130	FJBT	5.00
	150	SPBT	5.50
.30 (.308 dia.)	150	SPF (Cann.)	5.50
	170	SPF (Cann.)	5.75
	180	SPBT	5.75
	180	SP Dual-Core	8.25
	220	SP	6.35
	130	SP	5.25
.303 (.311 dia.)	150	SP	5.60
	180	SPBT	5.90
	215	SP	6.40
8mm (.318 dia.)	196	SP	5.95

PRECISION BULLETS for HUNTING and TARGET SHOOTING continued

Caliber	Grains	Type	Price/100
8mm (.322 dia.)	123	SP	$5.25
	165	SP	5.75
	196	SP	5.95
	227	SP	6.40
.35 (.358 dia.)	200	SP	6.20
	250	SP	7.35
.38 (.358 dia.)	110	HP	4.90
	148	WC Match	3.00
	158	Lead RN	3.00
	158	SP	4.90
	158	FJ Sem. WC	4.90
	158	HP	4.90
9 mm (.355 dia.)	104	Arm. Piercing	5.25
	115	HP	4.75
	116	FJ	4.60
9.3mm (.365 dia.)	286	SP	9.45
.44 Cal. (.430 dia.)	236	HP	7.45
	240	SPF	7.20
.45 Cal. (.451 dia.)	230	HP	7.00

NORMA PRIMERS

Berdan Primers (.216 dia.)	$11.95 per M
SUPERFLASH Large Rifle	8.25
SUPERFLASH Small Rifle	8.25
SUPERFLASH Large Pistol	8.25
SUPERFLASH Small Pistol	8.25
SUPERFLASH Shotshell N209	14.95

Gunbug's Guide	1.00 ea.
Norma Bullet & Case Display	See your dealer

NORMA POWDERS

Nos.	
(Rifle)	
200 (400 gram canister)	3.50
201 (400 gram canister)	3.50
203 (400 gram canister)	3.50
204 (400 gram canister)	3.50
205 (400 gram canister)	3.50
(Handgun)	
1010 (9 oz.)	2.25
1010 (8 lb.)	28.00
1020 (13 oz.)	2.85
1020 (8 lb.)	25.75
(Shotgun)	
2010 (8 oz.)	2.00
2010 (8 lb.)	25.00
2020 (10 oz.)	2.35
2020 (8 lb.)	25.00

ABBREVIATIONS

SP—soft point	R—round nose
HP—hollow point	F—flat nose
FJ—full jacket	BT—boat tail

Ammunition Price Includes Federal Excise Tax

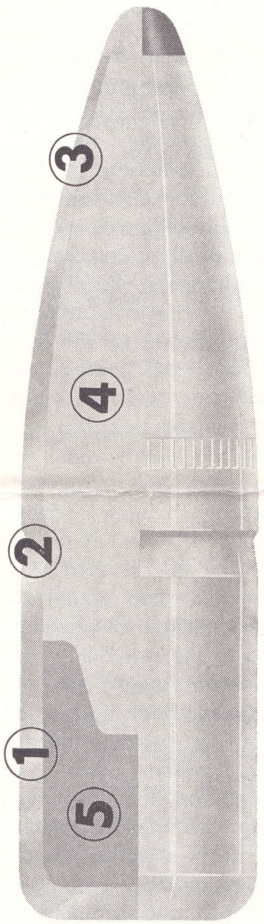
Norma Ammunition American Primed unless otherwise Indicated

norma news

A PAPER FOR HUNTERS AND GUNBUGS

Vol. 4 1966

HIT THEM ONCE WITH DUAL-CORE®



① Reinforced rear jacket.
② Cannelure and "step" in jacket.
③ Thin front jacket.
④ Expanding front core.
⑤ Hardened rear core.

THE 180 GRAIN NORMA DUAL-CORE BULLET IS AVAILABLE IN .308 WIN., .30—06 AND .308 NORMA MAGNUM CARTRIDGES. FOR HANDLOADING ALSO 180 GRAIN ROUND NOSE. ALSO 8 MM (.323") 196 GRAIN ROUND NOSE, 9.3 MM (.365") SEMI POINTED.

A famous North American hunter reports about his one-shot kill of a record size polar bear:

"Yesterday, I shot a Polar bear which, when the skin was loosely stretched out on the snow, squared out 10 ft 9 inches. After fleshing and after skinning out the feet this bruin will square more than 11 feet. This is the largest Polar taken out of Kotzebue this year so far as skin dimensions and body size are concerned. The head measured 27-2/16 inches, this is the length added to the width, the accepted Boone & Crockett system for adjuging bears. Larger heads than this have been taken this year out of here. However for sheer size my bear ranks above all the others.

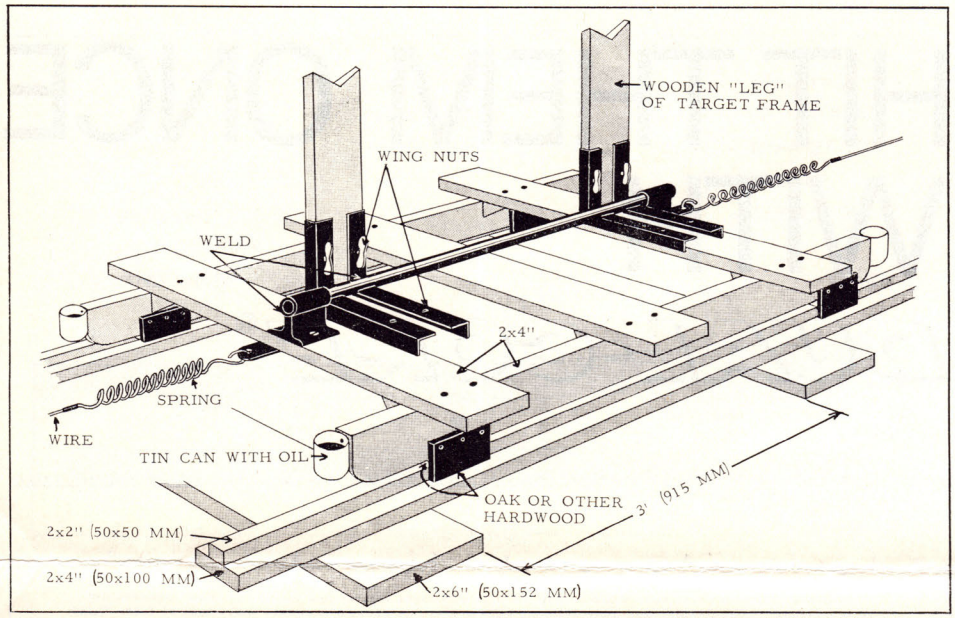
I shot this bear with the . 308 Norma Magnum. Using the new Norma "Dual-Core" 180-grain bullet. I hit the bear in the left shoulder as he went thundering past me at about 100 meters. The bullet penetrated the tremendous shoulder muscles, shattered the shoulder bones, sheered off the 2nd rib on the left side, penetrated the lungs, shattered the 5th rib on the right side and lodged under the skin behind the right foreleg. The total distance of travel through this 1200-lb animal, was approximately two feet.

I recovered the bullet while we skinned out the bear. The slug evidences the most perfect sort of performance. It mushroomed perfectly. The hard outer jacket, of mild steel, peeled back and opened up, but it peeled back only to half its length. If you will place this jacket on the scales right now I'll wager you will find that not one single fraction of grains weight has been lost".

Dr. Allan Lunderquist of Hässleholm, Sweden, killed this 9 foot tiger on the spot with one DUAL-CORE bullet from his .30—06 rifle. Hunt took place near Chanda, Central India.

BUILD A RUNNING MOOSE RANGE!

This range can be built by club members at low cost, and will provide for lots of fun and excellent shooting practice.



Above: Sled arrangement. The target is easily detachable by wing nuts. Target legs may also be placed at an angle, to avoid wooden framing behind the bull where most bullets go through.

■

Left: Target has reached far end of the run and is about to flip over for return motion.

■

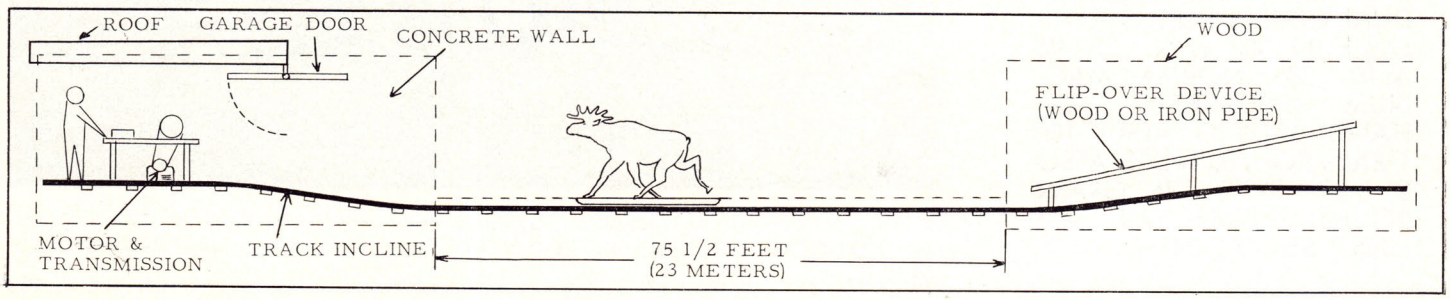
Below: Typical range lay-out. Many clubs find it preferable to build the track horizontal and use a slightly more powerful motor instead of the inclines.

The "running moose" has become one of the most popular range types in Scandinavia. Part of the reason is that such a range can be built by club members at a low cost, using a wooden sled on a wooden track. The moose target can of course be replaced by other game animals more common to the area in question, and members of the police or armed forces can also use the range for their "man target" training. For a club anniversary or other celebrations a frame with toy balloons to shoot at can provide for lots of fun and competition.

The standard range for the Scandinavian moose target is 80 meters, or approximately 88 yards, and the target is visible for about five seconds. The moose target is lifesize, and stands well over six feet high. The international running deer range is 100 meters, the deer is visible for only four seconds. It would of course be possible to adapt this kind of range system to smaller sized game, with a narrower track, lighter sled etc. and adjust the speed to the prevailing conditions.

It goes without saying that a range of this kind gives about the best possibilities for training and practice that hunters can have. It is, however, amazing how many non-hunters who find the moving targets fascinating, and they certainly are. Even die-hard target shooters find lots of fun in swinging sporting type guns on the moose range, and undoubtedly this is excellent training both for the eye and the trigger finger.

We would not be surprised if an entirely new shooting fraternity would develop from the work on the moving target ranges. This shooting is fun, and it also forms a sort of bridge between the stationary rifle target and the flying clay bird.



RAMBLING ABOUT THE DESIGNATION JUNGLE

Here's an interesting chapter reprinted from the Norma "Gunbug's Guide", a booklet available at low cost from your ammo dealer.

While most of our English-speaking friends know that a .257 caliber cartridge usually isn't .257, a .38 isn't .38 and so on, many of them may feel a bit lost in the European cartridge designation jungle. However, it is rather simpler than the English or American one, once you get started: European cartridge designations are based on the millimeter, — and there are 25.4 millimeters to an inch. Take the well-known 7 mm Mauser cartridge, for instance. In Europe, we call it the 7×57. This means 7 mm caliber, 57 mm case length. We also have a 7×64 mm, — which is same caliber with a longer case.

If you add an R to the designation, like 7×57 R, this means the same cartridge with a rimmed case, for use in double rifles, combination guns or other arms of the "break-open" or falling block type.

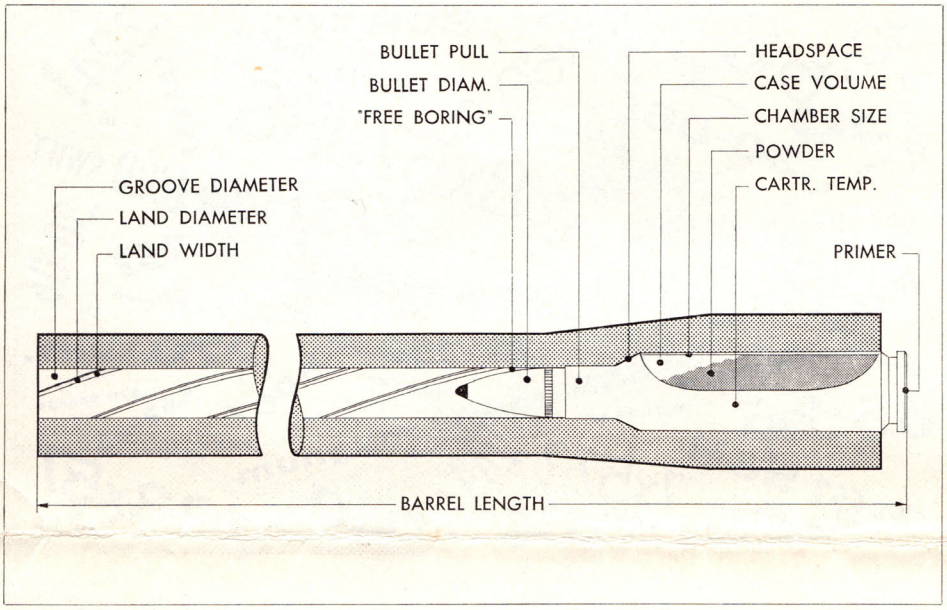
The 8×57 is the 8 mm Mauser cartridge. To this designation you sometimes find a J added. This is an abbreviation for "Infanterie", — a German word meaning "Infantry". The cartridge was the German military round of 1888. As a matter of fact, that J is an I, but to shooters outside Germany it looked more like a J as it was printed in earlier days. Hence we call the cartridge 8×57 J, — the Germans always call it the 8×57 I. The rimmed version is the 8×57 JR. As Germany, from where the Mauser rifles and their ammo came, changed their military bullet from round nose to pointed about 1905, the service rifles were changed to take a slightly larger bullet, the diameter went up from about .318 to .323 inches. "Spitz" is the German word for pointed (American shooters often mention a pointed bullet as a "spitzer", which word might be of German or Scandinavian origin) and the new bullet was designated "S" bullet, the larger bore the "S-bore".

The corresponding civilian cartridge became the 8×57 JS, the rimmed version the 8×57 JRS. From the above you will understand the importance of knowing which size 8 mm bore you have in your gun. Shooting the 8×57 J in the JS bore is no good because of too small bullet diameter, while shooting the 8×57 JS in the narrower J bore may blow your rifle. However, a good gunsmith can easily slug your barrel and find whether or. There is an 8×60 (without a J, because the 8×60 never was a military cartridge) and an 8×60 S, — these bores are the same as the 8 mm J and JS. The case is 3 mm longer than the 8×57. Did we say simple? Well, — we have to admit that neither of the 8 mm's really are 8 mm's — they are around 7.85 and 7.92, and the 9 mm isn't 9 mm either, it is 8.82, — but nevertheless, — you can keep European ammo apart by remembering the 3 main facts: First figure is caliber in millimeters, second figure is case length in millimeters, an **R** added means rimmed case.

CONVERSION FACTORS:

To convert: grams to grains	multiply by 15.43
To convert: grains to grams	multiply by .0648
To convert: kilograms sq cm to psi	multiply by 14.223
To convert: psi to kilograms sq cm	multiply by .07031
To convert: atmospheres to psi	multiply by 14.70
To convert: psi to atmospheres	multiply by .06804
To convert: foot pounds to kgm	multiply by .1383
To convert: kgm to foot pounds	multiply by 7.233
To convert: meters to feet	multiply by 3.281
To convert: feet to meters	multiply by .3048

THIS BULLET VELOCITY



More advanced gunbugs who have access to chronographs have often been puzzled about hard-to-explain velocity variations, and have become even more puzzled over how many things that actually influence bullet velocity. To clarify this point, we have made up the above sketch, showing some reasons for velocity variations between, for instance, two apparently equal rifles, between firing tests at different times of the year (temperature), between factory test barrels (ballistic table) and other test barrels or rifles etc. Remember that anything that increases velocity also increases breech pressure, usually more than it increases velocity. Guns and ammunition, like all other industrial products, must be allowed certain manufacturing tolerances. If several of the things that increase velocity happen to occur in one gun, this is usually the reason why it will not be able to "digest" the same load (number of grains of powder) as an apparently equal gun without pressure problems. But as you will understand, it might still produce the same velocity.

As for the sketch:

Land and groove diameter. Smaller dimensions increase pressure and bullet velocity.

Land width. The wider the land, the smaller of course the cross section of the bore, which means higher pressure and velocity.

"Free boring". This is the distance the bullet travels before it enters the rifling. A short free boring will increase pressure and velocity.

Bullet diameter. A larger bullet diameter naturally works the same way as a narrower bore.

Bullet pull. The harder the bullet sticks in the case, the higher the pressure and the velocity.

Headspace, case volume, chamber size. The case expands to fill the cartridge chamber. A small chamber gives less space for the burning powder, thereby higher pressure and more velocity.
Likewise, heavier case walls will decrease the powder space.

Powder has its manufacturing tolerances too. The same load taken from two canisters bought months or years apart may show a slight difference in pressure and velocity.

Cartridge temperature. Higher temperature will cause higher pressure and velocity.

Primer and powder should be matched to each other. A too hot primer will raise pressure and velocity.

Barrel length. A longer barrel will produce higher bullet velocity. Roughly, 16—17 fps. per inch in a standard caliber.
It goes without saying that if one or more of these variations go beyond manufacturing tolerance, you will have trouble. If all of them went one way you wold have a noticeable difference in pressure and velocity, mostly in pressure. In ordinary manufacture, tolerances are likely to be utilized both ways and more or less balance each other. Some of the above variations mean little to pressure and velocity, like for instance headspace and chamber size. Working with near maximum loads it is still interesting to note the difference between heavy and thin case walls. Barrel length, at least up to some 30 inches accounts for the greatest difference in velocity. Cartridge temperature also means more than most people think. If you want to kick somebody for lack of velocity, just leave his ammo in the refrigerator over night and shoot before sunrise.

No chronograph can measure muzzle velocity, and here is another point of confusion. You measure a lower velocity some distance ahead of the muzzle, and "figure back" to muzzle velocity. It would be a great advantage if everybody would agree on printing instrumental (measured) velocity at a given distance, like 10 feet or 10 meters.

AB NORMA PROJEKTILFABRIK - ÅMOTFORS - SWEDEN - TELEPHONE 0571-30820

Printed in Sweden.

DISTR. ENL. SFS 509/61 ARVIKA TIDNINGS TRYCKERI

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LOADING DATA

rifle powders

200 — 201 — 203 — 204 — 205
covering practically every rifle cartridge from the .222 to the .460 Weatherby. 200 is the fastest burning — 205 the slowest.

handgun powders

1010 — 1020, for revolver and automatic pistol cartridges, 1010 being the fastest burning.
A correct case mouth crimp is always important with handgun loads.

shotgun powders

2010 — 2020, the 2010 is a fastburning powder for trap and skeet loads, — 2020 a slower type for hunting loads. Note that 2010 and 2020 also give excellent results in many handgun cartridges.

NORMA RIFLE LOADING DATA

norma

Caliber	BULLET index no.	BULLET style	BULLET weight grains	BULLET weight grams	BULLET diam.	Cartridge length inch	Cartridge length mm	Powder	Load grains	Load grams	Muzzle velocity f/sec.	Muzzle velocity m/sec.	Pressure psi	Pressure atm.
220 Swift	607	Soft point semi pointed	50	3.2	.224	2.62	66.5	203	40.9	2.65	4110	1253	52100	3545
	609	Soft point semi pointed	55	3.6	.224	2.62	66.5	203	39.8	2.58	3840	1170	54200	3688
222 Rem.	607	Soft point semi pointed	50	3.2	.224	2.11	53.5	200	21.0	1.36	3200	975	45500	3096
	609	Soft point semi pointed	55	3.6	.224	2.11	53.5	200	21.0	1.36	3050	930	50000	3402
222 Rem. Magnum[1]	607	Soft point semi pointed	50	3.2	.224	2.28	58.0	203	30.0[2]	1.95	3500	1067	49670	3380
	609	Soft point semi pointed	55	3.6	.224	2.28	58.0	203	29.0	1.88	3320	1012	49920	3397
223	607	Soft point semi pointed	50	3.2	.224	2.17	55.0	200	25.2	1.63	3300	1006	50800	3456
	609	Soft point semi pointed	55	3.6	.224	2.17	55.0	201	25.9	1.68	3300	1006	47000	3198
22-250	607	Soft point semi pointed	50	3.2	.224	2.32	59.0	203	38.8	2.51	3800	1158	48500	3300
	609	Soft point semi pointed	55	3.6	.224	2.32	59.0	203	38.0	2.46	3650	1113	48500	3300
225 Win.[1]	607	Soft point semi pointed	50	3.2	.224	2.40	61.0	203	34.0	2.20	3685	1123	49790	3388
	609	Soft point semi pointed	55	3.6	.224	2.40	61.0	203	33.0	2.14	3500	1067	47080	3203
243 Win.	503	Hollow point	75	4.9	.243	2.66	67.5	204	48.0	3.11	3500	1067	46100	3069
	699	Soft point semi pointed	80	5.2	.243	2.54	64.5	205	49.4	3.20	3500	1067	46400	3160
	504	Soft point semi pointed	90	5.8	.243	2.54	64.5	204	45.3	2.93	3200	975	49600	3375
	566	Soft point semi pointed	100	6.5	.243	2.62	66.5	204	45.1	2.92	3070	936	43000	2926
	566	Soft point semi pointed	100	6.5	.243	2.62	66.5	205	48.3	3.13	3179	969	49140	3342
244 Rem.	503	Hollow point	75	4.9	.243	2.74	69.5	203	42.3	2.74	3500	1067	41200	2803
	504	Soft point semi pointed	90	5.8	.243	2.74	69.5	204	44.2	2.86	3200	975	41600	2831
	504	Soft point semi pointed	90	5.8	.243	2.74	69.5	205	50.0	3.24	3421	1043	49450	3363
6 MM Rem.	503	Hollow point	75	4.9	.243	2.82	71.5	204	50.6	3.28	3650	1113	48100	3273
	504	Soft point semi pointed	90	5.8	.243	2.77	70.0	204	47.7	3.09	3300	1006	48800	3320
	566	Soft point semi pointed	100	6.5	.243	2.82	71.5	205	47.1	3.05	3190	973	49200	3348
250 Savage	505	Soft point semi pointed	87	5.6	.257	2.44	62.0	203	35.3	2.29	3030	924	45500	3096
	506	Soft point semi pointed	100	6.5	.257	2.44	62.0	203	32.7	2.12	2820	860	41500	2824
	507	Soft point semi pointed	120	7.8	.257	2.44	62.0	203	31.3	2.03	2640	805	46600	3171
257 Roberts	505	Soft point semi pointed	87	5.6	.257	2.77	70.0	204	50.5	3.27	3360	1024	54000	3674
	506	Soft point semi pointed	100	6.5	.257	2.77	70.0	203	37.8	2.45	2900	884	41100	2796
	507	Soft point semi pointed	120	7.8	.257	2.77	70.0	203	36.6	2.37	2650	808	39700	2700
6.5 Jap.	618	Soft point semi pointed boattail	139	9.0	.264	2.82	71.5	203	32.8	2.12	2428	740	32200	2191
	509	Soft point round nose	156	10.1	.264	2.89	73.5	203	29.3	1.90	2067	630	31600	2150
6.5×54 MS	510	Soft point semi pointed	77	5.0	.264	2.56	65.0	203	40.5	2.62	3116	950	41100	2796
	618	Soft point semi pointed boattail	139	9.0	.264	2.93	74.5	203	37.8	2.45	2575	785	43800	2980
	509	Soft point round nose	156	10.1	.264	3.01	76.5	203	37.5	2.43	2461	750	45000	3062
6.5 Carcano	509	Soft point round nose	156	10.1	.264	2.97	75.5	200	27.5	1.78	2000	610	32800	2232
6.5×55	510	Soft point semi pointed	77	5.0	.264	2.62	66.5	200	37.8	2.45	3116	950	41800	2844
	511	Full jacket pointed	93	6.0	.264	2.70	68.5	203	45.2	2.93	3150	960	41200	2803
	618	Soft point semi pointed boattail	139	9.0	.264	2.99	76.0	204	46.6	3.02	2788	850	47100	3205
	618	Soft point semi pointed boattail	139	9.0	.264	2.99	76.0	205	51.2	3.32	2946	898	49630	3375
	509	Soft point round nose	156	10.1	.264	3.07	78.0	204	44.2	2.86	2493	760	47100	3205
	509	Soft point round nose	156	10.1	.264	3.07	78.0	205	48.8	3.16	2720	829	49440	3362
270 Win.	621	Soft point semi pointed	110	7.1	.277	3.15	80.0	204	59.1	3.83	3250	991	45000	3062
	621	Soft point semi pointed	110	7.1	.277	3.15	80.0	205	61.2[3]	3.96	3314	1010	46450	3160
	515	Soft point semi pointed boattail	130	8.4	.277	3.15	80.0	204	57.0	3.69	3140	957	48500	3300
	515	Soft point semi pointed boattail	130	8.4	.277	3.15	80.0	205	60.3[3]	3.91	3251	991	50700	3448
	518	Soft point semi pointed boattail	150	9.7	.277	3.23	82.0	204	52.4	3.39	2800	853	47400	3225
	518	Soft point semi pointed boattail	150	9.7	.277	3.23	82.0	205	58.5[3]	3.79	3028	923	52520	3571
7×57	624	Soft point semi pointed	110	7.1	.283	2.87	73.0	203	45.8	2.97	3067	935	47100	3205
	520	Soft point semi pointed boattail	150	9.7	.283	3.05	77.5	203	44.1	2.86	2756	840	47100	3205
	523	Soft point semi pointed boattail	160	10.4	.283	3.03	77.0	203	44.2	2.86	2707	825	50000	3402
	522	Soft point round nose	175	11.3	.283	3.07	78.0	203	42.3	2.74	2490	760	47700	3246
7×61 S & H (26 inch barrel)	624	Soft point semi pointed	110	7.1	.283	3.03	77.0	203	58.5	3.79	3480	1061	54400	3701
	520	Soft point semi pointed boattail	150	9.7	.283	3.19	81.0	204	63.2	4.09	3150	960	54000	3674
	523	Soft point semi pointed boattail	160	10.4	.283	3.19	81.0	205	64.0	4.15	3100	945	49000	3334
	522	Soft point round nose	175	11.3	.283	3.19	81.0	205	65.0	4.21	3000	914	54000	3674
7 MM Rem. Magnum (26 inch barrel)	519	Soft point semi pointed	110	7.1	.283	3.13	79.5	204	76.7	4.97	3750	1143	53700	3654
	520	Soft point semi pointed boattail	150	9.7	.283	3.29	83.5	205	71.4	4.63	3260	994	50800	3456
	523	Soft point semi pointed boattail	160	10.4	.283	3.19	81.0	205	69.4	4.50	3180	969	53700	3654
	522	Soft point round nose	175	11.3	.283	3.21	81.5	205	67.4	4.37	3070	936	53600	3647
284 Win.[1]	520	Soft point semi pointed boattail	150	9.7	.283	2.80	71.0	205	61.0[2]	3.95	3025	922	52310	3559
30-30 Win.	631	Soft point flat nose	150	9.7	.308	2.50	63.5	201	35.5	2.30	2410	735	41900	2851
	633	Soft point flat nose	170	11.0	.308	2.50	63.5	201	32.4	2.10	2220	677	41200	2800
30-40 Krag[1] (28 inch barrel)	528	Soft point semi pointed boattail	180	11.6	.308	3.09	78.5	205	50.0[2]	3.24	2420	738	38890	2646

NORMA RIFLE LOADING DATA

norma

Caliber	BULLET index no.	BULLET style	BULLET weight grains	BULLET weight grams	BULLET diam.	Cartridge length inch	Cartridge length mm	Powder	Load grains	Load grams	Muzzle velocity f/sec.	Muzzle velocity m/sec.	Pressure psi	Pressure atm.
308 Norma Magnum	529	Soft point semi pointed boattail	130	8.4	.308	3.17	80.5	204	78.8	5.10	3560	1085	53300	3627
	630	Soft point semi pointed boattail	150	9.7	.308	3.21	81.5	204	77.3	5.01	3350	1021	54000	3674
	578	Soft point semi pointed	180	11.6	.308	3.25	82.5	205	76.7	4.97	3100	945	51600	3511
	534	Soft point round nose	220	14.2	.308	3.31	84.0	204	69.0	4.47	2810	857	54100	3681
308 Win.	529	Soft point semi pointed boattail	130	8.4	.308	2.62	66.5	200	40.6	2.63	2900	884	47800	3252
	630	Soft point semi pointed boattail	150	9.7	.308	2.65	67.5	201	45.5	2.95	2860	872	43500	3300
	578	Soft point semi pointed boattail	180	11.6	.308	2.74	69.5	203	44.3	2.87	2610	796	49000	3334
7.62 Russian	529	Soft point semi pointed boattail	130	8.4	.308	2.72	69.0	203	54.6	3.54	3100	945	48000	3266
	630	Soft point semi pointed boattail	150	9.7	.308	2.76	70.0	203	52.0	3.37	2936	895	48000	3266
	528	Soft point semi pointed boattail	180	11.6	.308	2.82	71.5	203	45.2	2.93	2624	800	41900	2851
	534	Soft point round nose	220	14.2	.308	2.85	72.5	203	44.9	2.91	2395	730	48000	3266
30-06	529	Soft point semi pointed boattail	130	8.4	.308	3.11	79.0	203	57.5	3.72	3280	1000	47000	3198
	630	Soft point semi pointed boattail	150	9.7	.308	3.13	79.5	203	54.7	3.54	2970	905	44500	3028
	578	Soft point semi pointed boattail	180	11.6	.308	3.21	81.5	203	50.0	3.24	2700	823	45300	3082
	534	Soft point round nose	220	14.2	.308	3.25	82.5	203	47.3	3.06	2410	735	43700	2973
300 H & H	630	Soft point semi pointed boattail	150	9.7	.308	3.48	88.5	203	63.6	4.12	3020	921	53800	3661
	528	Soft point semi pointed boattail	180	11.6	.308	3.56	90.5	204	69.3	4.49	2920	890	47700	3246
	528	Soft point semi pointed boattail	180	11.6	.308	3.56	90.5	205	75.0[3]	4.86	3041	927	50440	3430
	534	Soft point round nose	220	14.2	.308	3.60	91.5	204	63.2	4.09	2620	800	48800	3320
	534	Soft point round nose	220	14.2	.308	3.60	91.5	205	71.5	4.63	2750	838	54120	3679
300 Win. Magnum[1]	630	Soft point semi pointed boattail	150	9.7	.308	3.32	84.5	205	82.0	5.32	3400	1036	52990	3605
	528	Soft point semi pointed boattail	180	11.6	.308	3.34	85.0	205	78.0	5.05	3135	956	53250	3623
7.65 Argentine	536	Soft point semi pointed	130	8.4	.311	2.68	68.0	201	50.9	3.30	3084	940	50000	3402
	564	Soft point semi pointed	150	9.7	.311	2.85	72.5	201	47.8	3.10	2920	890	46200	3143
	537	Soft point semi pointed boattail	180	11.6	.311	2.87	73.0	203	46.5	3.01	2739	835	46000	3130
	538	Soft point round nose	215	14.0	.311	2.95	75.0	203	43.9	2.84	2411	735	50000	3402
303 British	536	Soft point semi pointed	130	8.4	.311	2.78	70.5	200	39.4	2.55	2790	850	40500	2756
	564	Soft point semi pointed	150	9.7	.311	2.95	75.0	201	44.6	2.89	2720	829	40000	2722
	537	Soft point semi pointed boattail	180	11.6	.311	2.97	75.5	203	43.7	2.83	2540	774	42300	2878
	538	Soft point round nose	215	14.0	.311	3.05	77.5	203	39.4	2.55	2180	664	41900	2851
7.7 Jap.	536	Soft point semi pointed	130	8.4	.311	2.84	72.0	203	50.0	3.24	2952	900	38600	2626
	564	Soft point semi pointed	150	9.7	.311	3.01	76.5	201	47.1	3.05	2724	830	39000	2654
	537	Soft point semi pointed boattail	180	11.6	.311	3.03	77.0	203	45.2	2.93	2493	760	38000	2586
	538	Soft point round nose	215	14.0	.311	3.13	79.5	203	43.5	2.82	2264	690	37500	2552
8×57 JR	539	Soft point round nose	196	12.7	.318	2.97	75.5	203	44.8	2.90	2362	720	37300	2538
8×57 J	573	Soft point round nose	159	10.3	.318	2.85	72.5	203	50.0	3.24	2724	830	46500	3164
	539	Soft point round nose	196	12.7	.318	2.97	75.5	203	47.1	3.05	2526	770	45700	3109
8×57 JRS	541	Soft point semi pointed	123	8.0	.323	2.77	70.0	200	42.0	2.72	2690	820	39700	2701
	542	Soft point round nose	159	10.3	.323	2.85	72.5	203	48.4	3.14	2592	790	38900	2647
	540	Soft point round nose	196	12.7	.323	2.95	75.0	203	45.5	2.95	2395	730	39000	2654
	544	Hollow point boattail	198	12.8	.323	3.11	79.0	203	46.6	3.02	2461	750	39200	2667
	546	Soft point round nose	227	14.7	.323	2.93	74.5	203	43.0	2.79	2200	671	39700	2701
8×57 JS	541	Soft point semi pointed	123	8.0	.323	2.76	70.0	200	43.2	2.80	2888	880	44300	3014
	542	Soft point round nose	159	10.3	.323	2.85	72.5	203	50.9	3.30	2724	830	44600	3035
	540	Soft point round nose	196	12.7	.323	2.95	75.0	203	48.3	3.13	2526	770	47100	3205
	544	Hollow point boattail	198	12.8	.323	3.11	79.0	203	49.4	3.20	2624	800	47700	3246
	546	Soft point round nose	227	14.7	.323	2.93	74.5	203	45.5	2.95	2329	710	47100	3205
338 Win.[1]	–	Soft point	200	13.0	.338	3.33	84.5	205	80.0[2]	5.19	3000	915	51950	3535
(25 inch barrel)	–	Soft point	250	16.2	.338	3.34	85.0	205	76.0[2]	4.92	2730	832	53400	3633
358 Norma Magnum	547	Soft point semi pointed	200	13.0	.358	3.19	81.0	203	76.0	4.92	3120	951	53900	3667
	548	Soft point semi pointed	250	16.2	.358	3.23	82.0	203	70.2	4.55	2800	853	51100	3477
358 Win.	547	Soft point semi pointed	200	13.0	.358	2.68	68.0	201	48.3	3.13	2530	771	42100	2864
	548	Soft point semi pointed	250	16.2	.358	2.72	69.0	203	47.4	3.07	2250	686	41000	2790
9.3×57	549	Hollow point boattail	232	15.0	.365	2.97	75.5	201	49.4	3.20	2329	710	36000	2449
	550	Soft point round nose	286	18.5	.365	3.01	76.5	201	44.6	2.89	2067	630	35500	2415
9.3×62	549	Hollow point boattail	232	15.0	.365	3.19	81.0	201	57.3	3.71	2624	800	47100	3205
	550	Soft point round nose	286	18.5	.365	3.23	82.0	201	54.7	3.54	2362	720	47700	3246
375 H & H	640	Soft point semi pointed	270	17.5	.375	3.58	91.0	203	70.5	4.57	2740	835	48200	3280
	641	Soft point semi pointed	300	19.4	.375	3.58	91.0	203	67.1	4.35	2550	777	45100	3069

[1]) Load developed by H. P. White Laboratory, 26 inch barrel. [2]) Compressed load. [3]) Capacity load.

All information presented in this booklet is based upon results obtained in our ballistic laboratory, and is offered without charge as an aid to the handloaders to be employed at their own discretion and risk. Safe loading practices should be observed at all times. Since we have no control over the circumstances of loading we assume no liability for the results obtained, and we guarantee only that our product meets our manufacturing standards. The ballistics shown in the table are averages of ten shot strings fired in 24 inch barrels.

My favourite loads:

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NORMA HANDGUN LOADING DATA

norma

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Caliber	BULLET index no.	style	weight grains	weight grams	diam.	Cartridge length inch	Cartridge length mm	grains	grams	Muzzle velocity f/sec.	Muzzle velocity m/sec.	Pressure psi	Pressure atm.	Barrel length inch
25 ACP	680	Full jacket round nose	50	3.2	.251	.91	23.0	1.3	0.084	764	233	17500	1189	2.0
32 ACP	555	Full jacket round nose	77	5.0	.308	.98	25.0	2.0	0.130	900	275	14400	979	4.0
32 S & W	698	Lead round nose	85	5.5	.314	.93	23.5	1.3	0.084	787	240	14600	991	3.0
32 S & W Long	681	Lead round nose	98	6.4	.314	1.24	31.5	1.6	0.104	705	215	12500	850	4.0
32 S & W Long	681	Lead round nose	98	6.4	.314	1.24	31.5	1.8	0.117	794	242	14300	972	4.0
380 ACP	646	Full jacket round nose	95	6.1	.356	.98	25.0	3.2	0.207	1033	315	12300	837	3 3/4
38 Special	558	Lead wadcutter	148	9.6	.357	1.16	29.5	2.7	0.175	778	237	14500	984	6.0
38 Special	558	Lead wadcutter	148	9.6	.357	1.16	29.5	2.9	0.190	800	244	16600	1130	6.0
38 Special	559	Lead round nose	158	10.2	.357	1.50	38.0	3.8	0.250	810	247	13200	895	6.0
38 Special	559	Lead round nose	158	10.2	.357	1.50	38.0	4.1	0.265	870	265	15200	1032	6.0
38 Special	651	Full jacket semi wadcutter	158	10.2	.357	1.48	37.5	4.5	0.290	866	264	17600	1194	6.0
38 Special	651	Full jacket semi wadcutter	158	10.2	.357	1.48	37.5	4.6	0.300	900	274	18800	1283	6.0
38 Special	689	Hollow point	158	10.2	.357	1.46	37.0	4.6	0.300	900	274	18800	1283	6.0
38 S & W	605	Lead round nose	146	9.5	.359	1.16	29.5	2.2	0.143	730	222	7800	531	4.0
38 S & W	605	Lead round nose	146	9.5	.359	1.16	29.5	2.4	0.156	794	242	8900	608	4.0

NORMA HANDGUN LOADING DATA

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357 Magnum	576	Soft point flat nose	158	10.2	.357	1.59	40.5	12.2	0.790	1450	442	22600	1541	8 3/8
357 Magnum	576	Soft point flat nose	158	10.2	.357	1.59	40.5	13.2	0.850	1575	480	29400	2000	8 3/8
357 Magnum	651	Full jacket semi wadcutter	158	10.2	.357	1.59	40.5	12.2	0.790	1450	442	22600	1541	8 3/8
357 Magnum	689	Hollow point	158	10.2	.357	1.59	40.5	14.0	0.910	1706	520	39700	2700	8 3/8
38 Special	650	Hollow point	110	7.1	.357	1.46	37.0	12.6	0.815	1542	470	18600	1266	6.0
44 Magnum	690	Hollow point	236	15.3	.430	1.61	41.0	18.6	1.210	1675	511	31200	2120	18.5
44 Magnum*	690	Hollow point	236	15.3	.430	1.61	41.0	18.9	1.230	1705	520	38500	2620	18.5
44 Magnum	577	Soft point flat nose	240	15.6	.430	1.61	41.0	18.8	1.220	1675	511	31600	2150	18.5
44 Magnum*	577	Soft point flat nose	240	15.6	.430	1.61	41.0	19.1	1.240	1705	520	39000	2654	18.5

NORMA HANDGUN LOADING DATA

2010

25 ACP	680	Full jacket round nose	50	3.2	.251	.91	23.0	1.4	0.091	810	247	18600	1265	2.0
32 ACP	555	Full jacket round nose	77	5.0	.308	.98	25.0	2.0	0.130	900	275	16100	1092	4.0
32 S & W	698	Lead round nose	85	5.5	.314	.93	23.5	1.3	0.084	705	215	13300	907	3.0
32 S & W	698	Lead round nose	85	5.5	.314	.93	23.5	1.4	0.091	735	224	14900	1015	3.0
380 ACP	646	Full jacket round nose	95	6.1	.356	.98	25.0	3.3	0.214	1014	309	12800	872	3 3/8
380 ACP	646	Full jacket round nose	95	6.1	.356	.98	25.0	3.4	0.220	1030	314	14300	976	3 3/8
38 Special	558	Lead wadcutter	148	9.6	.357	1.16	29.5	2.3	0.149	735	224	14700	1000	6.0
38 Special	558	Lead wadcutter	148	9.6	.357	1.16	29.5	2.5	0.162	850	259	17000	1158	6.0
38 Special	559	Lead round nose	158	10.2	.357	1.50	38.0	3.7	0.240	853	260	13200	898	6.0
38 Special	559	Lead round nose	158	10.2	.357	1.50	38.0	4.0	0.259	922	281	16000	1089	6.0
38 S & W	605	Lead round nose	146	9.5	.359	1.16	29.5	2.1	0.136	689	210	10100	689	4.0
38 S & W	605	Lead round nose	146	9.5	.359	1.16	29.5	2.2	0.143	751	229	10700	729	4.0

NORMA HANDGUN LOADING DATA

2020

30 Luger	556	Full jacket round nose	93	6.0	.308	1.18	30.0	4.7	0.305	1230	375	34900	2374	4.7
32 ACP	555	Full jacket round nose	77	5.0	.308	.98	25.0	2.3	0.149	823	251	14500	987	4.0
32 ACP	555	Full jacket round nose	77	5.0	.308	.98	25.0	2.5	0.162	991	302	17600	1195	4.0
32 S & W	698	Lead round nose	85	5.5	.314	.93	23.5	1.5	0.097	680	207	15200	1034	3.0
7.5 Nagant	592	Lead round nose	104	6.7	.327	1.28	32.5	2.9	0.190	722	220	15000	1021	4.5
9 MM Luger	569	Armour piercing	104	6.7	.355	1.16	29.5	4.9	0.315	1260	385	35100	2390	4.7
9 MM Luger	696	Hollow point	115	7.4	.355	1.11	28.0	4.8	0.310	1165	355	35000	2380	4.7
9 MM Luger	557	Full jacket round nose	116	7.5	.355	1.16	29.5	4.9	0.315	1165	355	35000	2380	4.7
380 ACP	646	Full jacket round nose	95	6.1	.356	.98	25.0	3.6	0.233	1073	327	12000	818	3 3/4
38 Special	558	Lead wadcutter	148	9.6	.357	1.16	29.5	2.8	0.182	800	244	14100	958	6.0
38 Special	558	Lead wadcutter	148	9.6	.357	1.16	29.5	3.2	0.207	860	262	22300	1516	6.0
45 ACP	691	Full jacket round nose	230	14.9	.451	1.28	32.5	5.0	0.324	850	259	13600	927	5.0
45 ACP	692	Hollow point	230	14.9	.451	1.22	31.0	5.0	0.324	850	259	13600	927	5.0
45 ACP	691	Full jacket round nose	230	14.9	.451	1.28	32.5	5.8	0.376	919	280	19800	1346	5.0
45 ACP	692	Hollow point	230	14.9	.451	1.22	31.0	5.8	0.376	919	280	19800	1346	5.0

*) Special carbine load, do not use in revolvers.

NORMA SHOTGUN LOADING DATA

norma

1020

Gauge	Shell Length inch	Make of case & type	Make of primer & type	grains	grams	Wad column/shot container	Shot Charge oz.	Closure	Nominal M. Vel. feet/sec.
.410	$2^1/_2$	Paper	Win. 209 or Rem. 57 Star	15.0	0.970	Card overpowder wad & Felt filler wad	$^1/_2$	Crimp	1050

NORMA SHOTGUN LOADING DATA

2010

10	$2^7/_8$	Eley Paper	Eley	31.0 30.0	2.010 1.945	.125″ card, 2 pc. $^3/_8$″ Felt	$1^1/_4$ $1^5/_8$	Rolled	1360 1330
12	$2^3/_4$	Win. "Ranger" Plastic	Win. Western 209	21.5 20.0 22.5 21.0 23.5 22.0	1.390 1.295 1.455 1.360 1.520 1.425	.135″ card, $^1/_2$″ Felt Plastic Airwedge, $^3/_8$″ Felt .135″ card, $^3/_8$″ & $^1/_4$″ Felt Plastic Airwedge, $^1/_2$″ Felt .135″ card, $^1/_2$″ Felt Plastic Airwedge, $^3/_8$″ Felt	$1^1/_8$ $1^1/_8$ 1 1 $1^1/_8$ $1^1/_8$	Fold	1150 1150 1200 1200 1200 1200
				19.0 20.0	1.230 1.295	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
			Federal 209	19.0 20.0	1.230 1.295	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
			Alcan 220	19.0 20.0	1.230 1.295	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
		Western "Xpert" Paper	Win. Western 209	18.0 19.0	1.165 1.230	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
				17.0 18.0	1.100 1.165	Alcan No. 1 Flite-Max	$1^1/_8$	Fold	1150 1200
				18.0	1.165	Alcan No. 3 Flite-Max	$1^1/_8$	Fold	1150
				18.0 19.0	1.165 1.230	Verelite Green Wad	$1^1/_8$	Fold	1150 1200
				18.0 19.0 21.0	1.165 1.230 1.360	WW 'AA' Wad red	$1^1/_8$	Fold	1150 1200 1250
			C.C.I. 109	18.0 19.0 21.0	1.165 1.230 1.360	Olin Win. Wad	$1^1/_8$	Fold	1150 1200 1250
		Western "Xpert" Plastic	Win. Western 209	19.0 20.0	1.230 1.295	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
				19.0 20.0	1.230 1.295	Alcan No. 4 Flite-Max	$1^1/_8$	Fold	1150 1200
			Federal 209	19.0 20.0	1.230 1.295	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
			Alcan 220	19.0 20.0	1.230 1.295	Olin Win. Wad	$1^1/_8$	Fold	1150 1200
		Win. 'AA'	Win. Western 209	18.0 19.0	1.165 1.230	WW 'AA' White	$1^1/_8$	Fold	1150 1200
		Win. 'AA' Plastic	C.A.C.	18.0 18.0 18.0 18.0 18.0	1.165 1.165 1.165 1.165 1.165	C.A.C. Mono-Wad Rem. Power Piston Alcan Flite-Max Win. 'AA' Federal Champion	$1^1/_8$	Crimp	1150 1150 1150 1150 1150
				19.0 19.0 19.0	1.230 1.230 1.230	Rem. 'H' Wad Alcan Airwedge Win. Plastic Cup Wad	$1^1/_8$	Crimp	1150 1150 1150
				18.0	1.165	C.A.C. Felt Wad	$1^1/_8$	Crimp	1150
		Federal Monark Paper	Federal 209	18.0 19.0 20.0	1.165 1.230 1.295	Federal Champion	$1^1/_8$	Fold	1150 1200 1250
				18.0 19.0	1.165 1.230	WW 'AA' Wad White	$1^1/_8$	Fold	1150 1200
				19.0 20.0	1.230 1.295	Alcan No. 6 Flite-Max	$1^1/_8$	Fold	1150 1200
				18.0 19.0	1.165 1.230	Ford Yelo-Wad	$1^1/_8$	Fold	1150 1200
		Federal Plastic	Federal 209	18.0 19.0 21.0	1.165 1.230 1.360	Federal Champion	$1^1/_8$	Fold	1150 1200 1250
				18.0 19.0	1.165 1.230	Rem. Power Piston W29924	$1^1/_8$	Fold	1150 1200
				19.0 20.0	1.230 1.295	Alcan No. 4 Flite-Max	$1^1/_8$	Fold	1150 1200

Continued

NORMA SHOTGUN LOADING DATA

norma 2010

Gauge	Shell Length inch	Make of case & type	Make of primer & type	grains	grams	Wad column/shot container	Shot Charge oz.	Closure	Nominal M. Vel. feet/sec.
12	2¾	Federal Plastic	Federal 209	18.0 19.0	1.165 1.230	Ford Yelo-Wad	1⅛	Fold	1150 1200
				18.0 19.0 21.0	1.165 1.230 1.360	WW 'AA' Wad White	1⅛	Fold	1150 1200 1250
		Federal Game Plastic	Federal 209	19.0 20.0 22.0	1.230 1.295 1.425	Federal Champion with 20 gauge card under shot in container	1⅛	Fold	1150 1200 1250
		Rem. Super Speed Paper	Rem. 57	18.0 19.0 21.0	1.165 1.230 1.360	Rem. Power Piston Green	1⅛	Fold	1150 1200 1250
				17.0 18.0	1.100 1.165	Alcan No. 1 Flite-Max	1⅛	Fold	1150 1200
		Rem. Super Speed Plastic	Rem. 97	18.0 19.0 21.0	1.165 1.230 1.360	Rem. Power Piston Green	1⅛	Fold	1150 1200 1250
		Rem. Target or All-American Target	Rem. 97	18.0 19.0	1.165 1.230	Rem. Power Piston W23694	1⅛	Fold	1150 1200
				18.0 19.0 21.0	1.165 1.230 1.360	WW 'AA' Wad-red	1⅛	Fold	1150 1200 1250
				19.0 20.0	1.230 1.295	Rem. Power Piston W29926	1¼	Fold	1160 1220
		Rem. Shur Shot	Rem. 97	19.0 20.0	1.230 1.295	Rem. Power Piston W29924	1⅛	Fold	1150 1200
		Alcan Paper	Alcan 220	18.0 19.0	1.165 1.230	WW 'AA' Wad White	1⅛	Fold	1150 1200
				18.0 19.0	1.165 1.230	Federal Champion	1⅛	Fold	1150 1200
				18.0 19.0	1.165 1.230	Alcan No. 6 Flite-Max	1⅛	Fold	1150 1200
	2⅝	Blue Eley Trap-Paper	C.A.C.	20.0 20.0 20.0 20.0 20.0	1.295 1.295 1.295 1.295 1.295	C.A.C. Mono-Wad Rem. Power Piston Alcan Flite-Max Win. 'AA' Federal Champion	1⅛	Crimp	1200 1200 1200 1200 1200
				20.0 20.0 20.0	1.295 1.295 1.295	Rem. 'H' Wad Alcan Airwedge Win. Plastic Cup Wad	1⅛	Crimp	1150 1150 1150
				20.0	1.295	C.A.C. Felt Wad	1⅛	Crimp	1150
16	2¾	Eley Paper	Eley 1B	19.0 20.0	1.230 1.295	.125″ card, 2 pc. ⅜″ Felt, .125″ card .125″ card, 2 pc. ⅜″ Felt, .100″ card	1	Rolled	1130 1180
20	2¾	Eley Paper	Eley 1B	16.0 17.5	1.035 1.135	.125″ card, 2 pc. ⅜″ Felt, .125″ card .125″ card, 2 pc. ⅜″ Felt, .100″ card	⅞	Rolled	1150 1200
28	2¾	Plastic	Win. 209 or Rem. 57 Star	11.0	0.710	Plastic one piece	¾	Crimp	1150

All information presented in this booklet is based upon results obtained in our ballistic laboratory, and is offered without charge as an aid to the hand-loaders to be employed at their own discretion and risk. Safe loading practices should be observed at all times. Since we have no control over the circumstances of loading we assume no liability for the results obtained, and we guarantee only that our product meets our manufacturing standards. The ballistics shown in the table are averages of ten shot.

My favourite loads:

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NORMA SHOTGUN LOADING DATA

norma

2020

Gauge	Shell Length inch	Make of case & type	Make of primer & type	grains	grams	Wad column/shot container	Shot Charge oz.	Closure	Nominal M. Vel. feet/sec.
10	2 7/8	Eley Paper	Eley 1B	44.0	2.850	.125″ card, 2 pc. 3/8″ Felt	1 1/4	Rolled	1360
				43.0	2.785		1 5/8		1330
12	2 3/4	Win. "Ranger" Plastic	Win. Western 209	28.0	1.815	Plastic Airwedge, 3/8″ Felt	1 1/4		1220
				31.0	2.010	.135″ card, 3/8″ Felt			1220
				29.0	1.880	Plastic Airwedge, 3/8″ Felt			1330
				32.0	2.075	.135″ card, 1/4″ Felt	1 1/2	Fold	1330
				30.0	1.945	Plastic Airwedge, 1/4″ Felt			1330
		Rem. Target or AA	Rem. 97	27.0	1.750	Rem. Power Piston W29924	1 1/4	Fold	1220
		Rem. Express	Rem. 97	29.0	1.880	Power Piston W29928	1 1/4	Fold	1330
			Alcan G. 57F	30.0	1.945	Power Piston W29928	1 1/4	Fold	1330
		Win. Western 55 SX	Win. 209	28.0	1.815	Olin Win. Wad	1 1/4	Fold	1330
			Fed. 209	28.0	1.815	Olin Win. Wad	1 1/4	Fold	1330
			Alcan 220	28.0	1.815	Olin Win. Wad	1 1/4	Fold	1330
		Peters H.V.	Rem. 57	29.0	1.880	Olin Win. Wad	1 1/4	Fold	1330
		ICI Blue Star-Paper	C.A.C.	25.0	1.620	C.A.C. Mono-Wad	1 1/4	Crimp	1260
				25.0	1.620	Rem. Power Piston			1260
				25.0	1.620	Alcan Flite-Max			1260
				25.0	1.620	Win. 'AA'			1260
				25.0	1.620	Federal Champion			1260
				27.0	1.750	Rem. 'H' Wad	1 1/4	Crimp	1160
				27.0	1.750	Alcan Air Wedge			1160
				27.0	1.750	Win. Plastic Cup Wad			1160
				27.0	1.750	C.A.C. Felt Wad	1 1/4	Crimp	1200
16	2 3/4	Eley Paper	Eley 1B	26.0	1.685	.125″ card, 1/2″ Felt, .125″ card	1 1/8	Fold	1250
20	2 3/4	Eley Paper	Eley 1B	20.0	1.295	.125″ card, 2 pc. 3/8″ Felt Wad	1	Fold	1110
				21.0	1.360	.125″ card, 1/2″ Felt, .125″ card	1 1/8	Rolled	1130

For more loading data, write:

AB NORMA PROJEKTILFABRIK - ÅMOTFORS - SWEDEN

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